McGRANAHAN
CARLSON
& COMPANY
Investment Builders

4716

J-1K Lee

December 15, 1988

Mr. Richard R. Coles
Riedel Environmental Services, Inc.
20280 S. Vermont Ave., Suite 200
Torrance, CA 90502

Re: Oil Contaminated Soil Remediation - Request for Proposal

Dear Mr. Coles:

Enclosed is our Request for Proposal for the remediation of approximately 200,000 cu. yds of "crude oil" contaminated soil on property we are acquiring in Santa Fe Springs, CA.. As we have previously discussed, we are interested in a cost effective solution to our problem. We trust you and your company well be able to offer us such a solution.

We look forward to receiving your proposal.

Very truly yours,

Stephen M. Carlson

1000 Corporate Pointe, Suite 105
Culver City, California 90230
213/670-1313

McGRANAHAN
CARLSON
& COMPANY

Investment Builders

MC&C COMMERCE CENTER II
SANTA FE SPRINGS

CONTAMINATED SOIL REMEDIATION
REQUEST FOR PROPOSAL

1000 Corporate Pointe, Suite 105
Culver City, California 90230
213/670-1313, FAX: 213/670-6103

30092 Ivy Glenn Drive, Suite 230
Laguna Niguel, California 92677
714/249-1221, FAX: 714/249-8469

McGRANAHAN
CARLSON
& COMPANY
Investment Builders

December 15, 1988

Mr. Richard R. Coles
Riedel Environmental Services, Inc.
20280 S. Vermont Ave., Suite 200
Torrance, CA 90502

Re: Oil Contaminated Soil Remediation - Request for Proposal

Dear Mr. Coles:

MC&C is a real estate development company that is purchasing approximately 100 acres for industrial development in Santa Fe Springs, CA.. Our financial joint venture partner for this project is Old Stone Development Company, a subsidiary of Old Stone Bank headquartered in Providence, Rhode Island. For the past 60+ years these 100 acres have been operated as an oil field by Mobil Oil Company. It is the previous oil field operations on the property which has caused the contamination problem we are now concerned with.

The specific contamination problem on this property is essentially "crude oil" contaminated soil in old - 40+ years - production sumps and pits totaling up to 250,000 cu. yds.. Please review Exhibit A for details. We would like to receive a remediation proposal from you including the following information:

* Your Company's qualifications and experience with similar remediation projects including references.

* Proposed remediation schedule

* Description of the "scope of work" including a technical description of the proposed remediation technique.

* Guaranteed Maximum Cost with <u>unit prices</u> including (for example):

  Excavation

  Soil Replacement and Re-compaction

1000 Corporate Pointe, Suite 105
Culver City, California 90230
213/670-1313

Soil Contamination Remediation

Testing

Regulatory Permits & Fees (including processing)

Supervision and Profit

* Exclusions to the Remediation Contract

* Alternative Solutions for our Consideration

Enclosed for your use are the following exhibits:

Exhibit A	Soil Contamination and Remediation Information
Exhibit B	Location Map
Exhibit C	Executive Summary of Site Investigation of Petroleum Hydrocarbons - McLaren Environmental Engineering
Exhibit D	Areas of Contamination
Exhibit E	Typical Laboratory Tests of Contaminated Material
Exhibit F	Soil Investigation - Western Laboratories
Exhibit G	Tenative Tract Maps - Area 2, 5A & 5B

Please feel free to call me if you have any questions. I am also available to meet with you at your convenience.

I would like to receive your proposal within two weeks of the date of this letter. If you would like to respond, but cannot within the two week period, please call to discuss your situation.

I look forward to receiving your proposal.

Very truly yours,

Stephen M. Carlson

EXHIBIT A

SOIL CONTAMINATION AND REMEDIATION INFORMATION

EXHIBIT A

MC&C COMMERCE CENTER II

SANTA FE SPRINGS, CA

SOIL CONTAMINATION & REMEDIATION INFORMATION

LOCATION:

This project contains approximately 100 acres of flat land in four parcels located in Santa Fe Springs, CA. See attached location map - Exhibit B. Please note area designations - Areas 2, 3, 4, 5A, 5B and 5C. The Area 5C will be maintained by Mobil and is not to be "cleaned-up" at this time.

PROPOSED DEVELOPMENT:

This 100 acres will be subdivided and developed into an industrial park in three or four phases. Each phase will contain approximately 20 to 25 acres and will commence approximately one year apart. Phase I site grading (and remediation) is scheduled to begin the first quarter of 1989. At this time we expect Phase I to include Area 2, Phase II - Area 5A, Phase III - Area 5B, and Phase IV - Areas 3 & 4. Exhibit G is the subdivision maps for Areas 2, 5A and 5B.

SITE DEVELOPMENT:

In addition to the grading and recompaction of the site, the remediation of the contaminated soil, and construction of street improvements etc., we will be relocating the oil gathering pipelines and electrical power lines servicing Mobil's operating wells on the site. The excavation of the contaminated soil and the replacement/re-compaction of remediated soil can be coordinated with the site grading to save costs. However, we want to consider as an alternate an independent remediation plan including excavation, replacement and recompaction. Land area required for soil remediation processing or handling should be located within areas to be developed later, ie. Areas 5B, 3 & 4 if possible.

ENVIRONMENTAL CONSULTANTS:

Preliminary Consultant:

EBASCO
Dr. Richard Jenkins
714-662-4000

Active Consultant:

McLaren Environmental Engineering
Mr. Dennis Dineen
714-756-2667

TYPE OF SOIL CONTAMINATION:

Soil contamination on the site is from oil well operations including "crude oil" spills, closed production sumps, and pits. There are approximately 50 contamination locations (ie. pits, sumps, and spills) with an average surface area of approximately 5,000 square feet. Depths of the contamination are estimated to range from 3 to 31 feet and average less than 20 feet. Total contaminated soil is estimated to be 200,000 cu. yds. to 250,000 cu. yds. See Exhibit C, McLaren Executive Summary for Site Investigation of Petroleum Hydrocarbons, and Exhibit D, Contaminated Areas.

Estimated Contaminated Soil Quantities by Area:

AREA	CU. YDS. (in place)
2	64,000
3	37,000
4	21,000
5A	51,000
5B	40,000

(soil quantities shown are current estimates and are subject to change)

TPH ranges from 1,000 mg/kg to 60,000 mg/kg and is estimated to average < 10,000 mg/kg. Additional site explorations will be conducted within the next week. If you would like samples for your use or additional tests, please specify. Exhibit E contains several typical chemical analysis of the material.

Please note in your proposal the effect of any

variation on the above assumptions on remediation cost or schedule.

"CLEAN-UP" CRITERIA:

All soil in the identified areas with a TPH > 1,000 mg/kg will be remediated to TPH < 1,000 mg/kg. You will conduct the required testing to determine contaminated soil and successful remediation, including regulatory approval, subject to our consultant's approval and inspection (at our cost).

SOIL INVESTIGATION:

Exhibit F contains excerpts from Western Laboratories Soil Investigation.

EXHIBIT B

LOCATION MAP

MC&C COMMERCE CENTER II

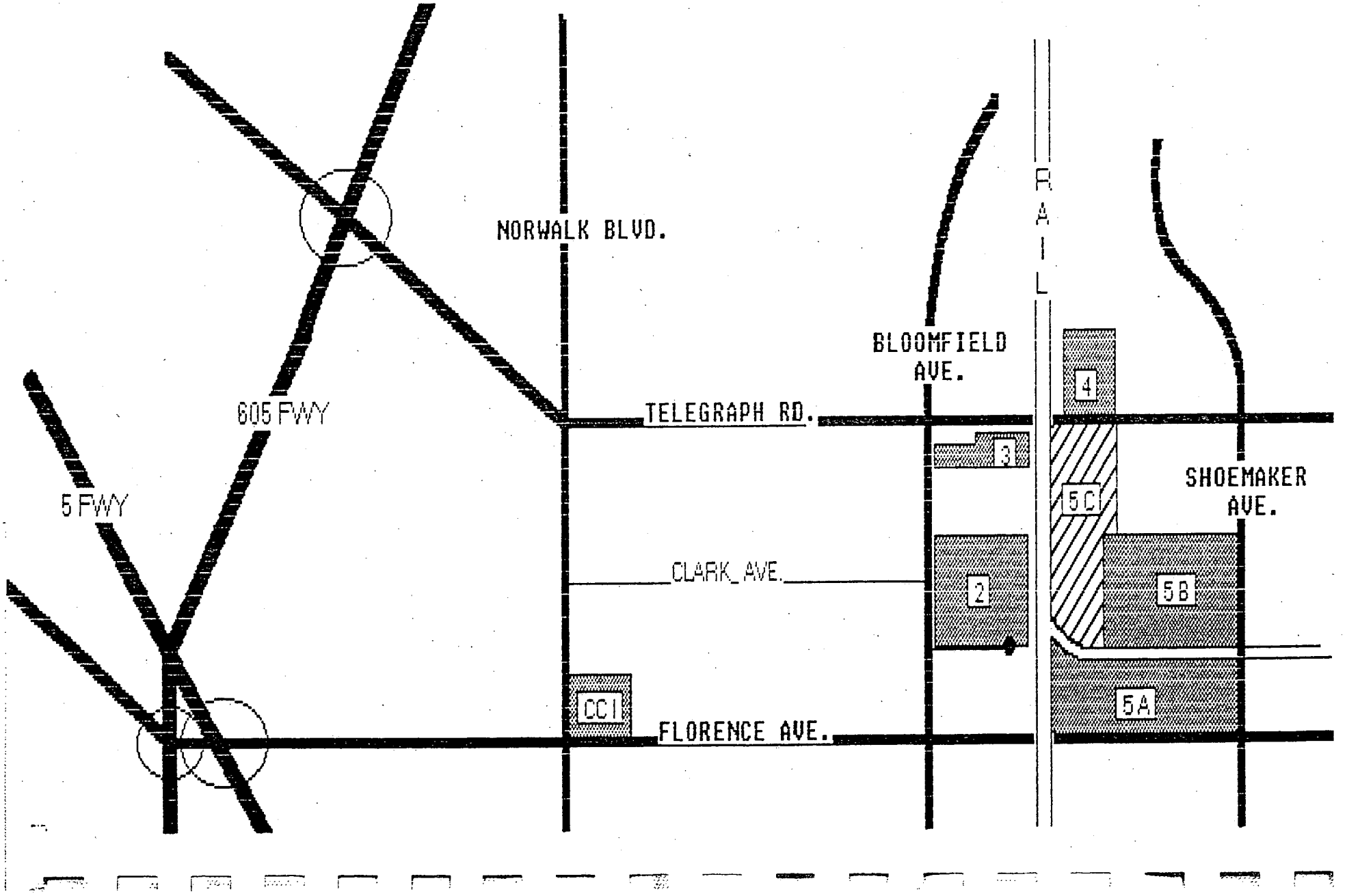


EXHIBIT C

EXECUTIVE SUMMARY OF SITE INVESTIGATION OF PETROLEUM HYDROCARBONS - MCLAREN

McLaren Environmental Engineering

December 7, 1988

Mr. Stephen M. Carlson
McGranahan, Carlson and Company
1000 Corporate Pointe, Suite 105
Culver City, California 90230

Dear Mr. Carlson:

Per your request, McLaren Environmental Engineering has prepared the attached executive summary for site investigations of petroleum hydrocarbons at McGranahan, Carlson and Company Commerce Center in the City of Santa Fe Springs, California.

The attached summary and the estimate of petroleum hydrocarbon contaminated soil in the oil field production sumps, were prepared through available data, assumptions noted in the summary, and our best judgement.

Should you have any questions regarding this summary, please feel free to contact me at (714) 756-2667.

Very truly yours,

Emmanuel Fakhoury

for Dennis Dineen
Principal Scientist

/bar

Enclosure

2855 Pullman Street, Santa Ana, CA 92705 (714) 756-2667
Headquarters: 11101 White Rock Road, Rancho Cordova, CA 95670 (916) 638-3696

EXECUTIVE SUMMARY OF SITE INVESTIGATION OF PETROLEUM HYDROCARBONS AT McGRANAHAN, CARLSON AND COMPANY COMMERCE CENTER SANTA FE SPRINGS, CALIFORNIA

DECEMBER 7, 1988

I. INTRODUCTION

A. **Description:** The McGranahan, Carlson and Company Commerce Center is located within the Santa Fe Springs oil field at Florence Avenue and Shoemaker Avenue. The property is approximately 125 acres divided into five major areas, A2, A3, A4, A5A, and A5B (see Figure 1). Thirty-five potential former oil production pits (sumps) were identified form Aerial photographs by Ebasco Services Incorporated. Psomas and Associates have identified forty-four oil products sumps. Review of the data indicates that at least 12 of the sumps identified by Ebasco were not included in the forty-four found by Psomas; therefore, 56 sumps may be present on-site.

B. **Work to Date:** Work conducted to date to identify the location and/or extent of contaminated soil at the Commerce Center included: (a) Ebasco Services Incorporated, October 1988 and November 1988 reports; (b) Western Laboratories, October 21, 1988 report; (c) Ecology and Environment Incorporated, January 20, 1988 report; and (d) Psomas and Associates aerial photograph interpretation.

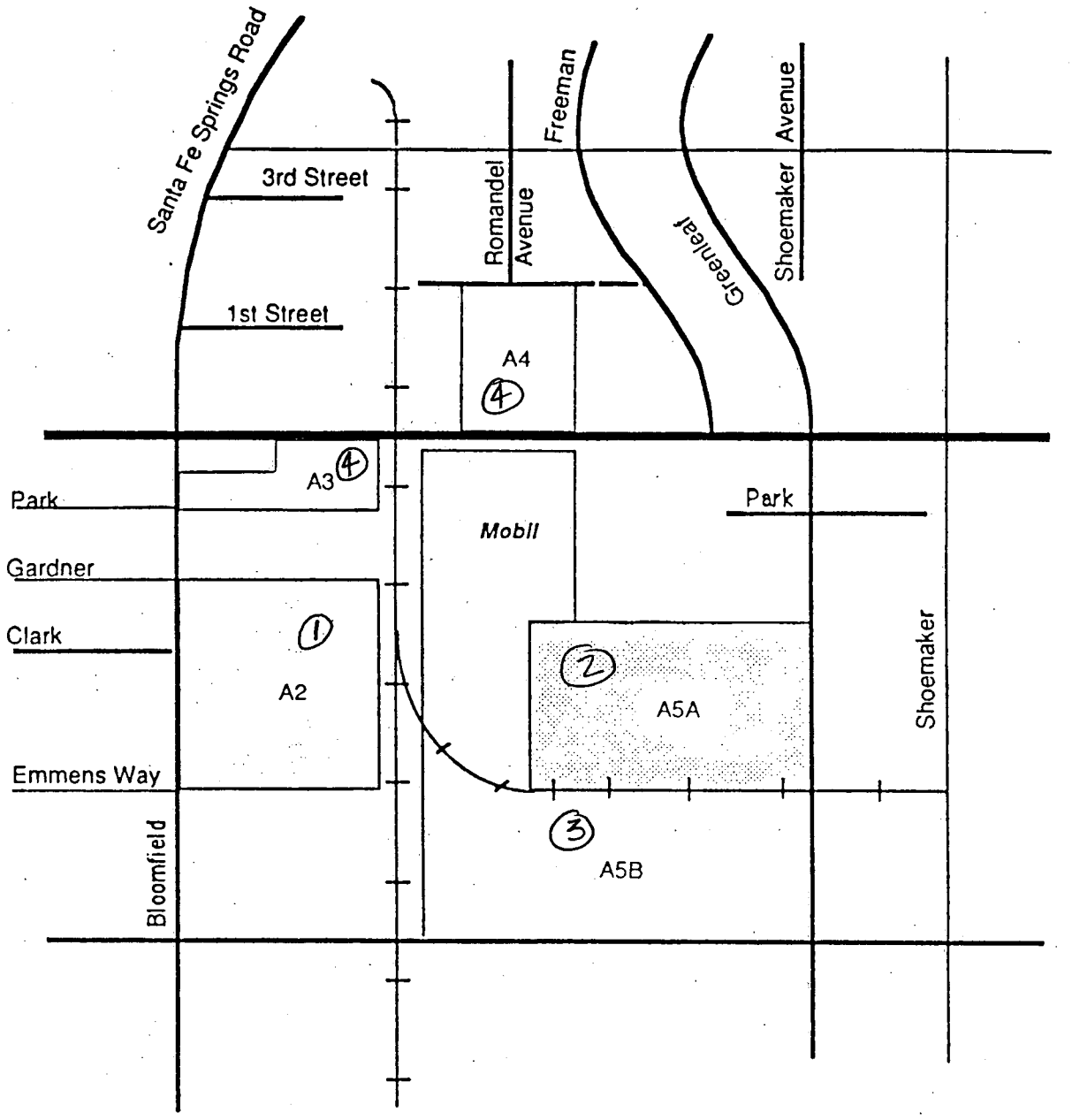
C. **General Characteristics:** According to the November 1988 report, thirty-five potential oil production sumps were identified from aerial photographs. Eighteen sumps were subjected to field investigation. Petroleum hydrocarbon contaminated soil was estimated by Ebasco at 83,700 cubic yards in thirteen sumps and greater than 22,800 cubic yards in five sumps. The extent of petroleum hydrocarbon contamination in Ebasco's reports was based on visual observations and/or laboratory analysis of soil samples with total petroleum hydrocarbons greater than 1,000 mg/kg. Of the forty-four oil field production sumps identified by Psomas and Associates, six sumps were subjected to field study by Ebasco.

II. METHODOLOGY OF ESTIMATED PETROLEUM HYDROCARBON CONTAMINATED SOIL

A. **Assumptions:** For the purpose of estimating the volume of petroleum hydrocarbon contaminated soil in each sump, the following assumptions were used:

FIGURE 1
SITE PLOT PLAN
MOBIL OIL FIELD
SANTA FE SPRINGS, CALIFORNIA

* AREAS of Development
⊙



N

(NTS)

McLaren Environmental Engineering

The oil production sumps identified by Psomas and Associates and Ebasco Services Incorporated were categorized into three groups depending on size of the sump. Sumps with areas of 50 feet by 50 feet were labeled small, sumps with areas of 50 to 90 feet by 50 to 90 feet were labeled medium, and sumps with areas greater than 90 feet by 90 feet were labeled large. Taking into consideration the soil texture and excavation practices prior to 1930, when most of the sumps were active, a slope of two-to-one on the sides of each sump and a depth of five feet, eight feet and twelve feet were assumed for small, medium and large sump, respectively. A sample volume calculation of cubical sump versus trapezoidal sump, as that described above, is presented in Figure 2.

Since sandy textures dominate the upper 25 feet of the areas of interest, an expansion factor of 1.2 was assumed to measure excavated soil volume versus in-situ volume. Depths of possible contamination were determined by using soil analyses, soil texture, and field observations. The total volume may be less if the depth of penetration was shallower. This can not be confirmed without further soil sampling. It does not seem likely that there would be deeper contamination, since the few bore holes that were analyzed at the deeper depths of 30 to 60 feet did not show signs of contamination.

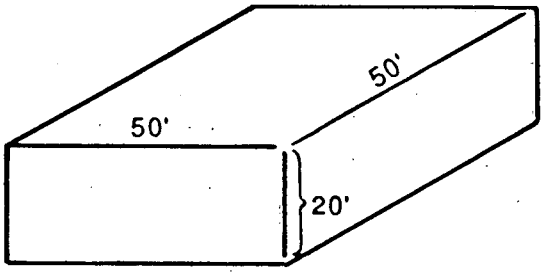
It also does not seem likely that there was lateral migration of the sump deposits due to the observations made in the trenches and also in Area 5, Sump A samples MO# 8B/12 and MO# 7/15. Soil sample MO# 8B/12 appears to be taken on the sump boundary and petroleum hydrocarbon was not detected; however, sample MO# 7/15 was taken in the sump area a few feet from sample MO# 8B/15 and a TPH concentration of 1489 ppm was reported.

B. **Rationale for Determining Vertical Extent of Contamination:** Data from Western Laboratories, October 1988 report; Ebasco Services Incorporated, October and November 1988 reports; and interpretation of aerial photographs were used in calculating the vertical and horizontal extent of petroleum hydrocarbon contaminated soil in the oil field production sumps.

The rationale in determining the vertical extent of petroleum hydrocarbon contamination in each area identified by Ebasco and Psomas Surveys are summarized in Tables 1 through 5.

FIGURE 2
SAMPLE CALCULATION
OF PETROLEUM HYDROCARBONS
CONTAMINATED SOIL

CUBICAL SUMP

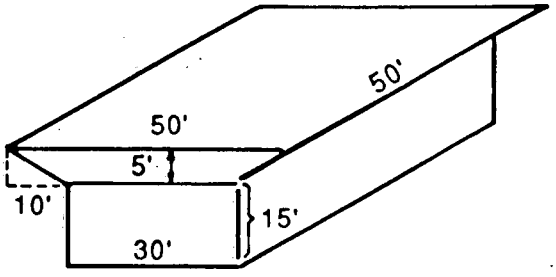


IN SITU VOLUME
50 x 50 x 20 =
1852 CUBIC YARDS

EXCAVATED VOLUME
(FACTOR 1.2)

1852 x 1.2
= 2222 CUBIC YARDS

TRAPIZOIDAL SUMP



IN SITU VOLUME

$$\left[\frac{(50 + 30)\ 5}{2}\right] \times 50 +$$

30 x 15 x 50

=1204 CUBIC YARDS

EXCAVATED VOLUME
(FACTOR 1.2)

1204 x 1.2
=1445 CUBIC YARDS

III. CALCULATION OF ESTIMATED VOLUME OF PETROLEUM HYDROCARBON CONTAMINATED SOIL

General characteristics, work completed, and estimated petroleum hydrocarbons contaminated soil in each area are presented in Tables 6 through 10. Estimates of contaminated soil in each area are summarized in Table 11. Table 11 presents volume contaminated soil in cubical sumps and trapezoidal sumps configurations. A factor of 1.2 was used to increase the volume of excavated soil versus in-situ volumes.

Available data, assumptions made in this report, and our best judgement were used in estimating the volume of petroleum hydrocarbon contamination in the soil. Due to the uncertainty of the actual volume and excavation practices, our estimate of excavated contaminated soil in the sumps ranges between 193,783 cubic yards and 256,952 cubic yards.

TABLE 1

Rational for Estimating the Depth
of Hydrocarbon Soil Contamination of Sumps in Area 2

Area 2

Ebasco Nov. 88 Sump I.D.	Length (ft)	Width (ft)	Depth (ft)	Rationale for depth estimation
J	50	50	20	Western labs. Trench 27 and 30 - sand with some clay - visual contamination greater than 15'
K	105	54	20	MO# 16/12' 4200 ppm TPH at 12' sand with some clay - also visual contamination greater than 15'
L	105	45	25	MO# 15/12' 13,000 ppm TPH at 12' course sand from 20-25' visual contamination greater than 15'
M	105	105	25	T-2/10' 9,929 ppm TPH at 10', BH-8 sand to 28', visual contamination greater than 15'

The above rationale is interpolated into estimating total depth of contamination in sumps identified by Psomas and Associates.

PSOMAS Sump I.D.	Area (ft)	Depth (ft)
A + B	12,550	25
C	4,500	20
D	910	20
E	5,900	20
F	4,000	20
G	2,960	20
H	4,690	20
I	3,400	20
J	3,450	20
K	3,207	20
L	10,000	20

TABLE 2

Rational for Estimating the Depth
of Hydrocarbon Soil Contamination of Sumps in Area 3

AREA 3

Ebasco Nov. 88 Sump I.D.	Length (ft)	Width (ft)	Depth (ft)	Volume (cy)	Rationale for depth estimation
N	212	105	20	16,489	Fine to medium sands to 15' A3T #4/6 - 24,531 ppm TPH at 6' visual confirmation greater than 15'

The above rationale is interpolated into estimating depth of contamination in sumps identified by Psomas and Associates.

PSOMAS Sump ID	Area	Depth (ft2)
A	5,420	20
B	2,230	20
C	790	20
D	1,540	20
E	9,600	20
F	8,100	20

TABLE 3

Rational for Estimating the Depth of Hydrocarbon Soil Contamination of Sumps in Area 4

AREA 4

Ebasco Nov. 88 Sump I.D.	Length (ft)	Width (ft)	Depth (ft)	Rationale for depth estimation
O	90	81	20	Visual contamination > 15' 3' 15065 ppm TPH
P	480	60	5'	Visual contamination to 3' does not say if trenched deeper
Q	300	300	0	At 10' (A4T-1/10') + 3' (A4T-3/3') low ppm - may not be contaminated

The above rationale is interpolated into estimating total depth of contamination in sumps identified by Psomas and Associates.

PSOMAS Sumps ID	Area (ft 2)	Depth (ft)
A	5,290	20
B	4,720	20
C	4,240	20

TABLE 4

Rational for Estimating the Depth
of Hydrocarbon Soil Contamination of Sumps in Area 5A

AREA 5 A

Ebasco Nov. 88 Sump I.D.	Length (ft)	Width (ft)	Depth (ft)	Rationale for depth estimation
G	200	200	0	Visual contamination to 11' but 2 samples are low or ND (MO-14/10' + MO-17/12') BH-11 sample at 50'-ND
H	120	65	10'	No Table 8 in report for visual observations for T-7, T-8, & T-10. Silty soil to clay silt in area.
I	140	65	20'	MO-18/12' 1,900 ppm - found in is clay layer seen in B-12. No contamination at 35' but visual to > 15'

The above rationale is interpolated into estimating depth of contamination in sumps identified by Psomas and Associates.

A	9,200	20
B	15,052	10
C	2,340	20
D	4,950	20
E	6,240	20
F	6,040	20
G	6,300	20
H	8,590	20
I	2,810	20
J	6,490	20
K	4,490	20

TABLE 5

Rational for Estimating the Depth
of Hydrocarbon Soil Contamination of Sumps in Area 5 B

AREA 5 B

Ebasco Nov. 88 Sump I.D.	Length (ft)	Width (ft)	Depth (ft)	Rationale for depth estimate
A	100	75	20	> 15' contamination but from BH 2 & BM4 the texture > 15'
B	100	45	5	Visual contamination is low MO 2/10' only 1 sample measured but visual 2-4 _____ however, may not need cleanup.
C	189	100	0?	Low concentrations in MD-3 and MD-9 (N/D) although visual contamination was seen. Also MD-4 and MD-5 may not be contaminated. BH-5 at 33, 38, 42, 53, and 63' were analyzed and no contamination was detected. Visual observations were in accordance with the analysis.
D	60	48	0	1 sample is < 1,000 ppm at 10' may not be contaminated.
E-1	150	90	0	MO 11/11 210 ppm may not be contaminated at30' BH 10 low ppm may not be contaminated
E-2	100	81	0	MO 10/10 - ND may not be contaminated
F	60	50	20	MO 13/12 - 3,000 ppm visual to > 15' silt to ~25' from BH 10-nearest texture data

The above rational is interpolated into estimating depth of contamination in sumps identified by Psomas and Associates

PSOMAS Sumps ID	Area (ft 2)	Depth (ft)
A	1800	20
B	9000	20
C	5400	20
D	4500	20
H	1600	20
I	3000	20
J	3600	20
K	7200	20
L	4500	20
M	2500	20

TABLE 6

SUMMARY OF AREA 2

GENERAL CHARACTERISTS AND WORK COMPLETED IN EACH SUMP

EBASCO SUMP ID *	PSOMAS SUMP ID	ESTIMATED DIMENSION L X W	ESTIMATED AREA (SF)	ESTIMATED DEPTH (FT)	TRENCHES COMPLETED	TRENCHES CLEAN	TRENCHES (CONT)	TRENCHES ANALYZED	BORINGS/ TRENCH #	SAMPLE ID	SAMPLE DEPTH (FT)	TPH ppm
J(K-E)		50 X 50	2500	20	3	0	3	0				
K(L-E)		105 X 54	5670	20	6	0	6	1	T19	MO-16	12	4200
L(M-E)		105 X 45	4725	25	2	0	2	1	T9	MO-15	12	13000
M(M-E)		105 X 105	11025	25	8	0	8	3	T2	P13 T-2	10	9929
									T3	P13 T-3	3	69319
									T4	P13 T-4	5	13794
	A+B	90 X 140	12600	25								
	C	90 X 50	4500	20								
	D	30 X 30	900	20								
	E	90 X 65	5850	20								
	F	90 X 45	4050	20								
	G	70 X 42	2940	20								
	H	125 X 38	4750	20								
	I	70 X 50	3500	20								
	J	70 X 50	3500	20								
	K	75 X 45	3375	20								
	L	80 X 125	10000	20								

TOTAL ESTIMATED VOLUME OF PETROLEUM HYDROCARBON CONTAMINATED SOIL IN CUBIC YARDS

EBASCO SUMP ID NOV-88'	PSOMAS SUMP ID	SUMP CATAGORY **	CUBICAL SUMP		TRAPIZOIDAL SUMP	
			IN SITU	EXCAVATED (FACTOR 1.2)	IN SITU	EXCAVATED (FACTOR 1.2)
J(K-E)		S	1852	2222	1204	1445
K(L-E)		M	4200	5040	3176	3811
L(M-E)		M	4375	5250	3255	3906
M(M-E)		L	10208	12250	6662	7994
	A+B	L	11667	14000	8627	10352
	C	M	3333	4000	2385	2862
	D	S	674	809	389	467
	E	M	4370	5244	3341	4010
	F	M	2963	3556	2147	2576
	G	M	2193	2632	1195	1434
	H	M	3474	4169	2475	2970
	I	M	2518	3022	1644	1973
	J	M	2555	3067	1644	1973
	K	M	2376	2851	1647	1976
	L	L	7407	8889	5416	6500
		TOTAL:	64165	76998	45207	54248

*: J(K-E)= J EBASCO November 1988 Sump ID; K-E EBASCO October 1988 Sump ID

**: S=Small; M=Midium; L=Large

TABLE 7

SUMMARY OF AREA 3

GENERAL CHARACTERISTS AND WORK COMPLETED IN EACH SUMP

EBASCO SUMP ID *	PSOMAS SUMP ID	ESTIMATED DIMENSION L X W	ESTIMATED AREA (SF)	ESTIMATED DEPTH (FT)	TRENCHES COMPLETED	TRENCHES CLEAN	TRENCHES (CONT)	TRENCHES ANALYZED	BORINGS/ TRENCH #	SAMPLE ID	SAMPLE DEPTH (FT)	TPH ppm
N(N-E)		212 X 105	22260	20	5	0	5	3	T1	A3 T-1	5	8255
									T3	A3 T-3	10	173
									T4	A3 T-4	6	24531
	A	90 X 60	5420	20								
	B	60 X 35	2230	20								
	C	30 X 25	790	20								
	D	50 X 30	1540	20								
	E	80 X 120	9600	20								
	F	60 X 135	8100	20								

TOTAL ESTIMATED VOLUME OF PETROLEUM HYDROCARBON CONTAMINATED SOIL IN CUBIC YARDS

EBASCO SUMP ID NOV-88'	PSOMAS SUMP ID	SUMP CATAGORY **	CUBICAL SUMP		TRAPIZOIDAL SUMP	
			IN SITU	EXCAVATED (FACTOR 1.2)	IN SITU	EXCAVATED (FACTOR 1.2)
N(N-E)		L	16489	19787	13875	16650
	A	M	4015	4818	2862	3434
	B	S	1652	1982	1102	1322
	C	S	585	702	231	277
	D	S	1141	1369	722	866
	E	L	7111	8533	5120	6144
	F	L	6000	7200	4507	5408
		TOTAL:	36993	44391	28419	34101

*: N(N-E)= N EBASCO November 1988 Sump ID; N-E EBASCO October 1988 Sump ID

**: S=Small; M=Midium; L=Large

TABLE 8

SUMMARY OF AREA 4

GENERAL CHARACTERISTS AND WORK COMPLETED IN EACH SUMP

EBASCO SUMP ID *	PSOMAS SUMP ID	ESTIMATED DIMENSION L X W	ESTIMATED AREA (SF)	ESTIMATED DEPTH (FT)	TRENCHES COMPLETED	TRENCHES CLEAN	TRENCHES (CONT)	TRENCHES ANALYZED	BORINGS/ TRENCH #	SAMPLE ID	SAMPLE DEPTH (FT)	TPH ppm
O(P-E)		90 X 81	7290	20	1	0	1	1	T2	A4 T-4	10	26
P(P-E)		480 X 60	28800	5	7	0	0	0				
Q(P-E)		300 X 300	90000	0	2	0	2	2	T1	A4 T-1	3	15065
									T3	A4 T-3	3	114
	A	70 X 75	5250	20								
	B	50 X 95	4750	20								
	C	75 X 55	4125	20								

TOTAL ESTIMATED VOLUME OF PETROLEUM HYDROCARBON CONTAMINATED SOIL IN CUBIC YARDS

EBASCO SUMP ID NOV-88'	PSOMAS SUMP ID	SUMP CATAGORY **	CUBICAL SUMP		TRAPIZOIDAL SUMP	
			IN SITU	EXCAVATED (FACTOR 1.2)	IN SITU	EXCAVATED (FACTOR 1.2)
O(P-E)		M	5400	6480	3864	4637
P(P-E)		L	5333	6400	5333	6400
Q(P-E)		L	0	0	0	0
	A	M	3889	4667	2561	3074
	B	M	3519	4223	2570	3084
	C	M	3056	3667	2013	2415
		TOTAL:	21197	25437	16341	19610

*: O(P-E)= O EBASCO November 1988 Sump ID; P-E EBASCO October 1988 Sump ID

**: S=Small; M=Midium; L=Large

:TABLE 9

SUMMARY OF AREA 5A

GENERAL CHARACTERISTS AND WORK COMPLETED IN EACH SUMP

EBASCO SUMP ID *	PSOMAS SUMP ID	ESTIMATED DIMENSION L X W	ESTIMATED AREA (SF)	ESTIMATED DEPTH (FT)	TRENCHES COMPLETED	TRENCHES CLEAN	TRENCHES (CONT)	TRENCHES ANALYZED	BORINGS/ TRENCH #	SAMPLE ID	SAMPLE DEPTH (FT)	TPH ppm
G(H-1,2)		200 X 200	40000	0	13	0	13	2	T5	MO-14	10	160
									T13	MO-17	12	ND
H(I-E)		120 X 65	7800	10	2	0	2	1				
I(J-E)		140 X 65	9100	20	8	0	8	3	T20	MO-18	12	1900
	A	40 X 23	920	20								
	B	85 X 180	15300	10								
	C	55 X 40	2200	20								
	D	50 X 100	5000	20								
	E	60 X 105	6300	20								
	F	30 X 200	6000	20								
	G	120 X 50	6000	20								
	H	85 X 100	8500	20								
	I	40 X 70	2800	20								
	J	60 X 105	6300	20								
	K	100 X 45	4500	20								

TOTAL ESTIMATED VOLUME OF PETROLEUM HYDROCARBON CONTAMINATED SOIL IN CUBIC YARDS

EBASCO SUMP ID NOV-88'	PSOMAS SUMP ID	SUMP CATAGORY **	CUBICAL SUMP		TRAPIZOIDAL SUMP	
			IN SITU	EXCAVATED (FACTOR 1.2)	IN SITU	EXCAVATED (FACTOR 1.2)
G(H-1,2)		L	0	0	0	0
H(I-E)		L	2889	3467	2889	3467
I(J-E)		L	6741	8089	5123	6148
	A	S	681	817	383	460
	B	L	5667	6800	5667	6800
	C	S	1630	1956	1154	1385
	D	M	3704	4445	2756	3307
	E	M	4667	5600	3524	4229
	F	L	4444	5333	3698	4438
	G	M	4444	5333	3496	4195
	H	L	6296	7555	4684	5621
	I	S	2074	2489	1316	1579
	J	M	4667	5600	3529	4235
	K	M	3333	4000	2480	2976
		TOTAL:	51237	61484	40699	48840

*: H(I-E)= H EBASCO November 1988 Sump ID; I-E EBASCO October 1988 Sump ID

**: S=Small; M=Midium; L=Large

TABLE 10

SUMMARY OF AREA 5B

GENERAL CHARACTERISTS AND WORK COMPLETED IN EACH SUMP

EBASCO SUMP ID	PSOMAS SUMP ID	ESTIMATED DIMENSION L X W	ESTIMATED AREA (SF)	ESTIMATED DEPTH (FT)	TRENCHES COMPLETED	TRENCHES CLEAN	TRENCHES (CONT)	TRENCHES ANALYZED	BORINGS/ TRENCH #	SAMPLE ID	SAMPLE DEPTH (FT)	TPH ppm
A	E	100 X 75	7500	20	9	0	9	3	T13	MO-1	12	ND
									T37	MO-7	15	1489
									T37	MO-88	12	3
B	F	100 X 45	4500	5	2	0	2	1	T11	MO-2	12	56
C	G	100 X 100	10000	0	16	0	16	5	T20	MO-3	12	14
									T24	MO-4	12	26
									T34	MO-9	12	ND
									T35	MO-5	12	9
									T39	MO-8	12	3
D		60 X 48	2880	0	2	0	2	1	T52	MO-12	12	530
E1		150 X 90	13500	0	6	0	6	1	T36	MO-11	10	210
E2		100 X 81	8100	0	10	0	10	1	T26	MO-10	11	ND
F		60 X 50	3000	20	1	0	1	1	T13	MO-13	12	3000
	A	60 X 30	1800	20								
	B	100 X 90	9000	20								
	C	90 X 60	5400	20								
	D	90 X 50	4500	20								
	H	40 X 40	1600	20								
	I	75 X 40	3000	20								
	J	90 X 40	3600	20								
	K	90 X 80	7200	20								
	L	90 X 50	4500	20								
	M	50 X 50	2500	20								

TABLE 10 (Continued):

SUMMARY OF AREA 5B

TOTAL ESTIMATED VOLUME OF PETROLEUM HYDROCARBON CONTAMINATED SOIL IN CUBIC YARDS

EBASCO SUMP ID NOV-88'	PSOMAS SUMP ID	SUMP CATAGORY *	CUBICAL SUMP		TRAPIZOIDAL SUMP	
			IN SITU	EXCAVATED (FACTOR 1.2)	IN SITU	EXCAVATED (FACTOR 1.2)
A	E	M	5555	6666	4133	4960
B	F	M	833	1000	833	1000
C	G	L	0	0	0	0
D		S	0	0	0	0
E1		L	0	0	0	0
E2		L	0	0	0	0
F		S	2222	2666	1574	1889
	A	S	1333	1600	944	1133
	B	L	6667	8000	6644	7973
	C	M	4000	4800	2862	3434
	D	M	3333	4000	2385	2862
	H	S	1185	1422	667	800
	I	M	2222	2666	1464	1757
	J	M	2667	3200	1908	2290
	K	M	5333	6400	3816	4579
	L	M	3333	4000	2385	2862
	M	S	1852	2222	1204	1445
		TOTAL:	40535	48642	30819	36984

*: S=Small; M=Midium; L=Large

TABLE 11

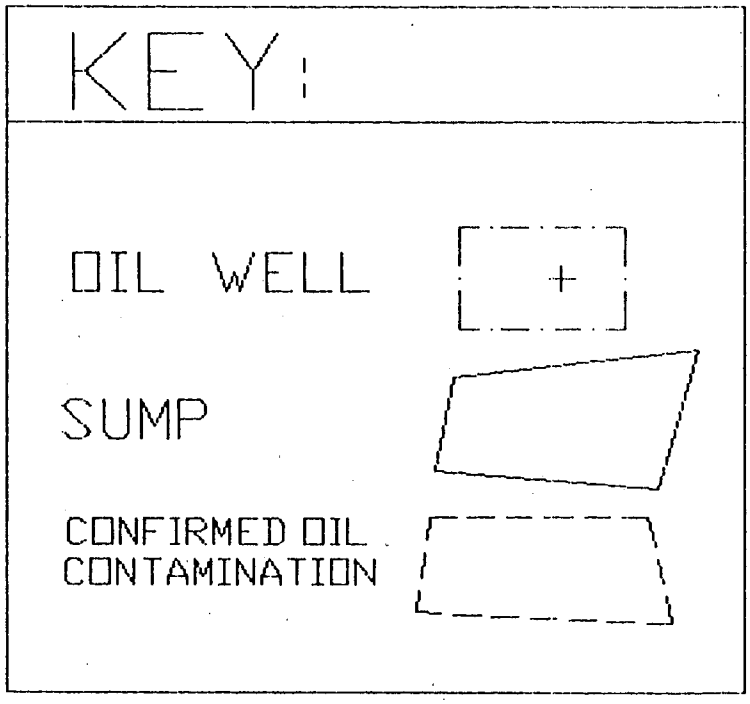
ESTIMATED VOLUME OF PETROLEUM HYDROCARBON CONTAMINATED SOIL
(IN CUBIC YARDS)

	Cubic Sump		Trapezoidal Sump	
	In-Situ	Excavated	In-Site	Excavated
Area 2	64,165	76,998	45,207	54,248
Area 3	36,993	44,391	28,419	34,101
Area 4	21,197	25,437	16,341	19,610
Area 5A	51,237	61,484	40,699	48,840
Area 5B	40,535	48,642	30,819	36,984
Total	214,127	256,952	161,485	193,783

EXHIBIT D

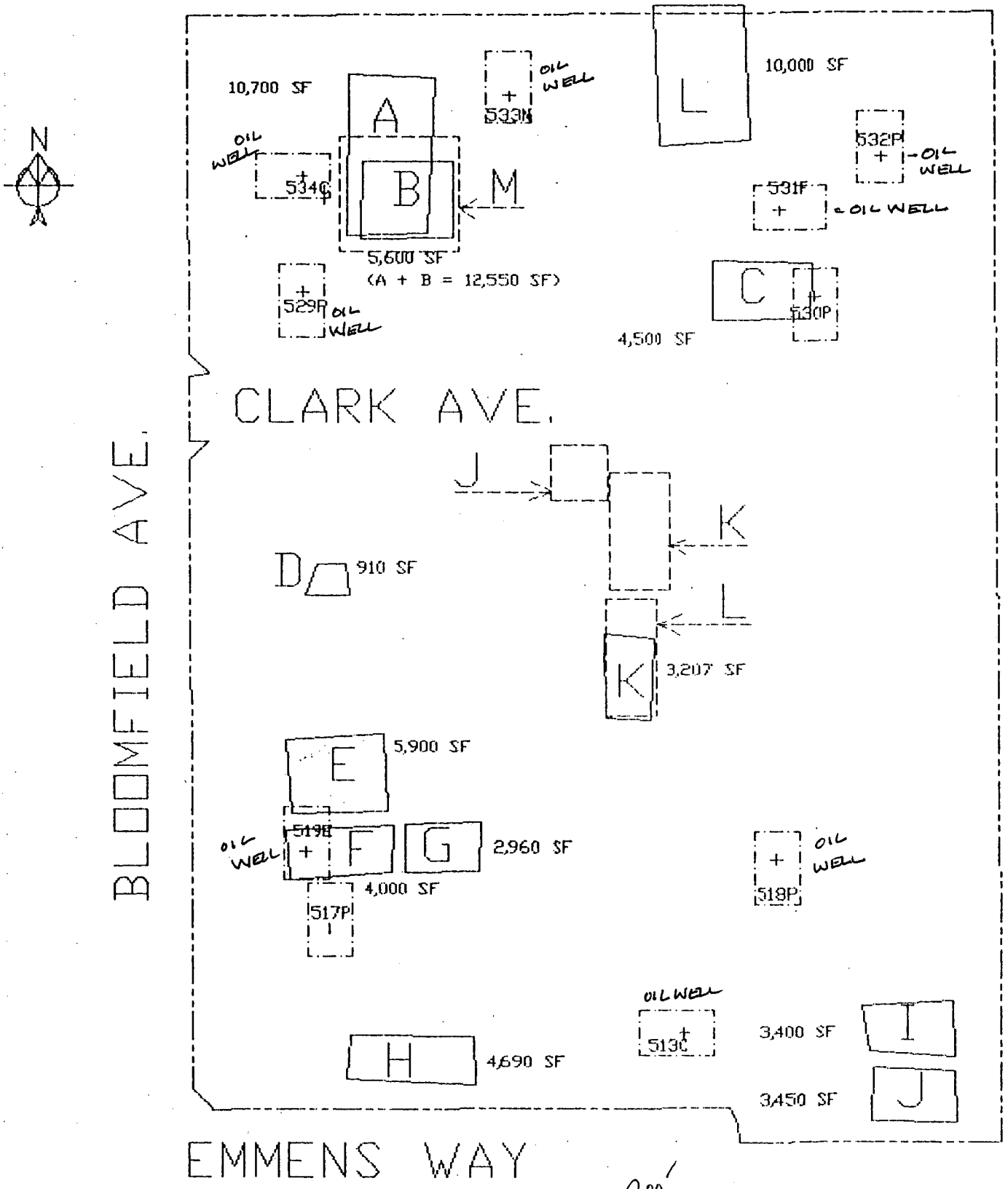
AREAS OF CONTAMINATION

EXHIBIT D



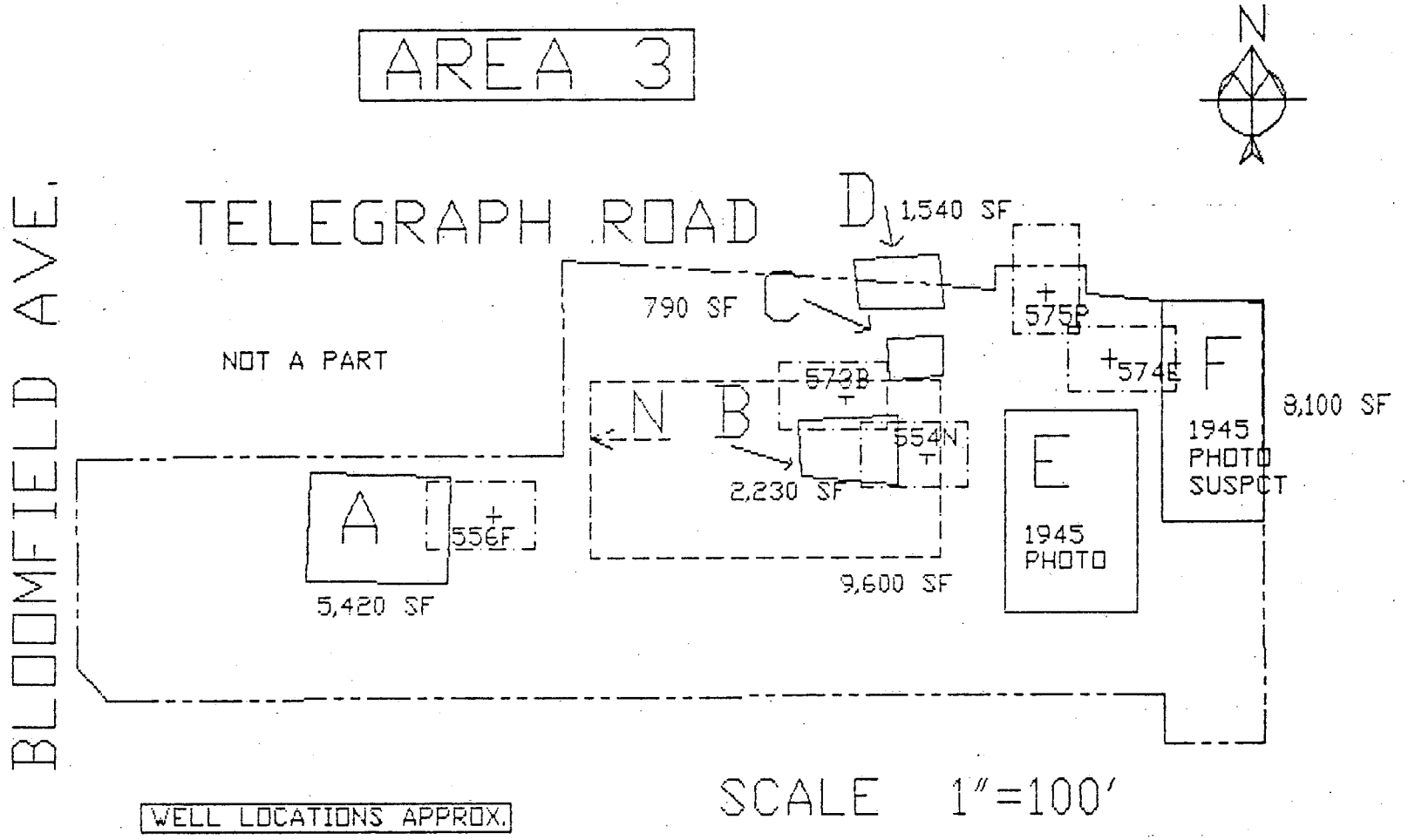
AREA 2

SUMPS FROM PHOTOS



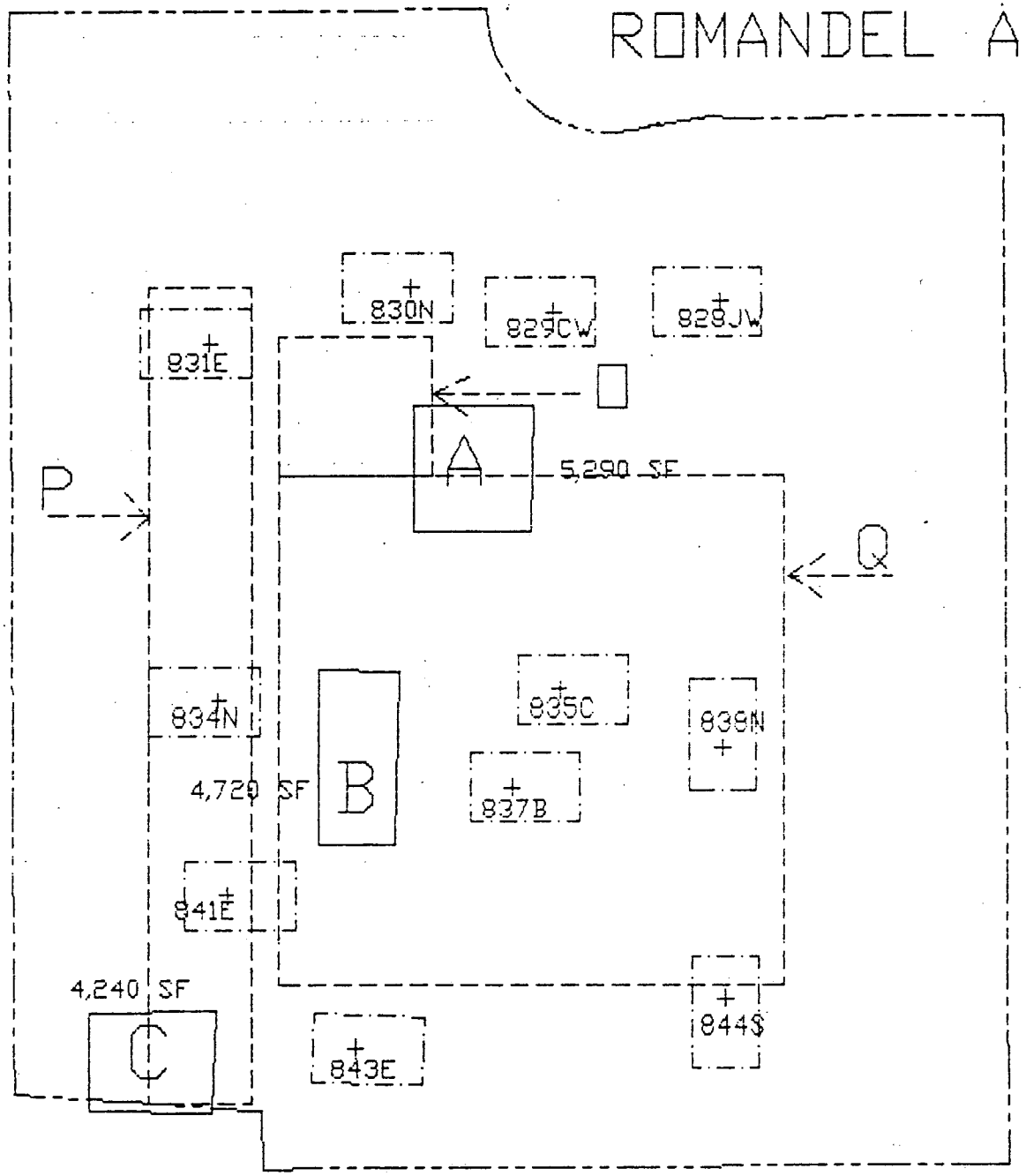
SUMPS FROM PHOTOS

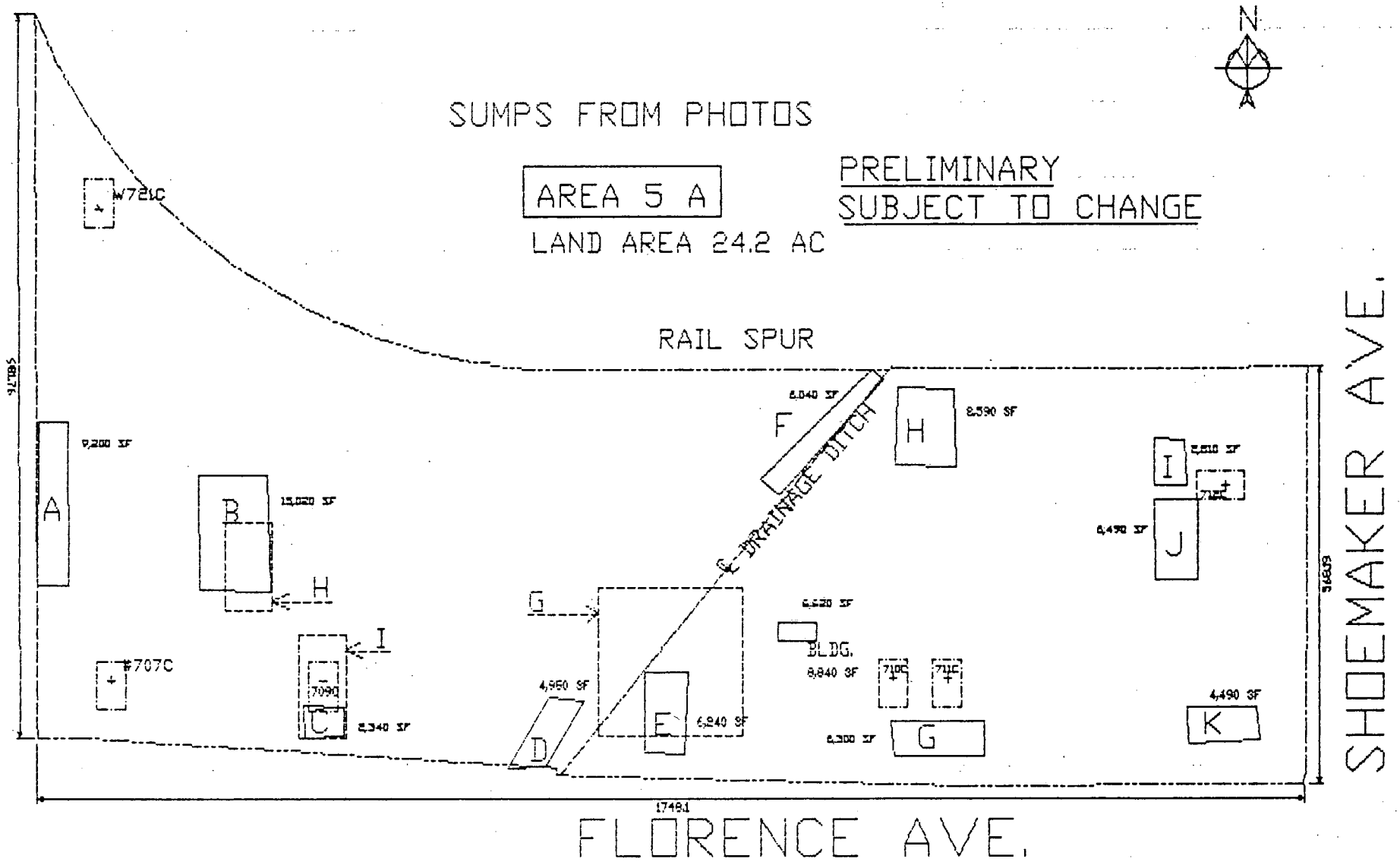
AREA 3



WELL LOCATIONS APPROX.

SCALE 1"=100'


ROMANDEL AVE.
830N
829CW
828JW
831E
AREA 4
P
A
5,290 SF
Q
N
WELL LOCATIONS APPROX.
834N
B
835C
839N
4,720 SF
837B
841E
SUMPS FROM PHOTOS
4,240 SF
C
844S
843E
TELEGRAPH ROAD
SCALE = 1" = 100'


N
SUMPS FROM PHOTOS
AREA 5 A
LAND AREA 24.2 AC
PRELIMINARY
SUBJECT TO CHANGE
W721C
RAIL SPUR
9,200 SF
A
B
15,020 SF
H
I
7090
C
8,340 SF
#707C
G
4,950 SF
D
E
6,840 SF
6,040 SF
F
DRAINAGE DITCH
H
8,590 SF
6,520 SF
BLDG.
8,840 SF
710C
711C
6,300 SF
G
I
6,490 SF
J
4,490 SF
K
SHOEMAKER AVE.
17481
FLORENCE AVE.

SCALE 1" = 200'

SUMPS FROM PHOTOS

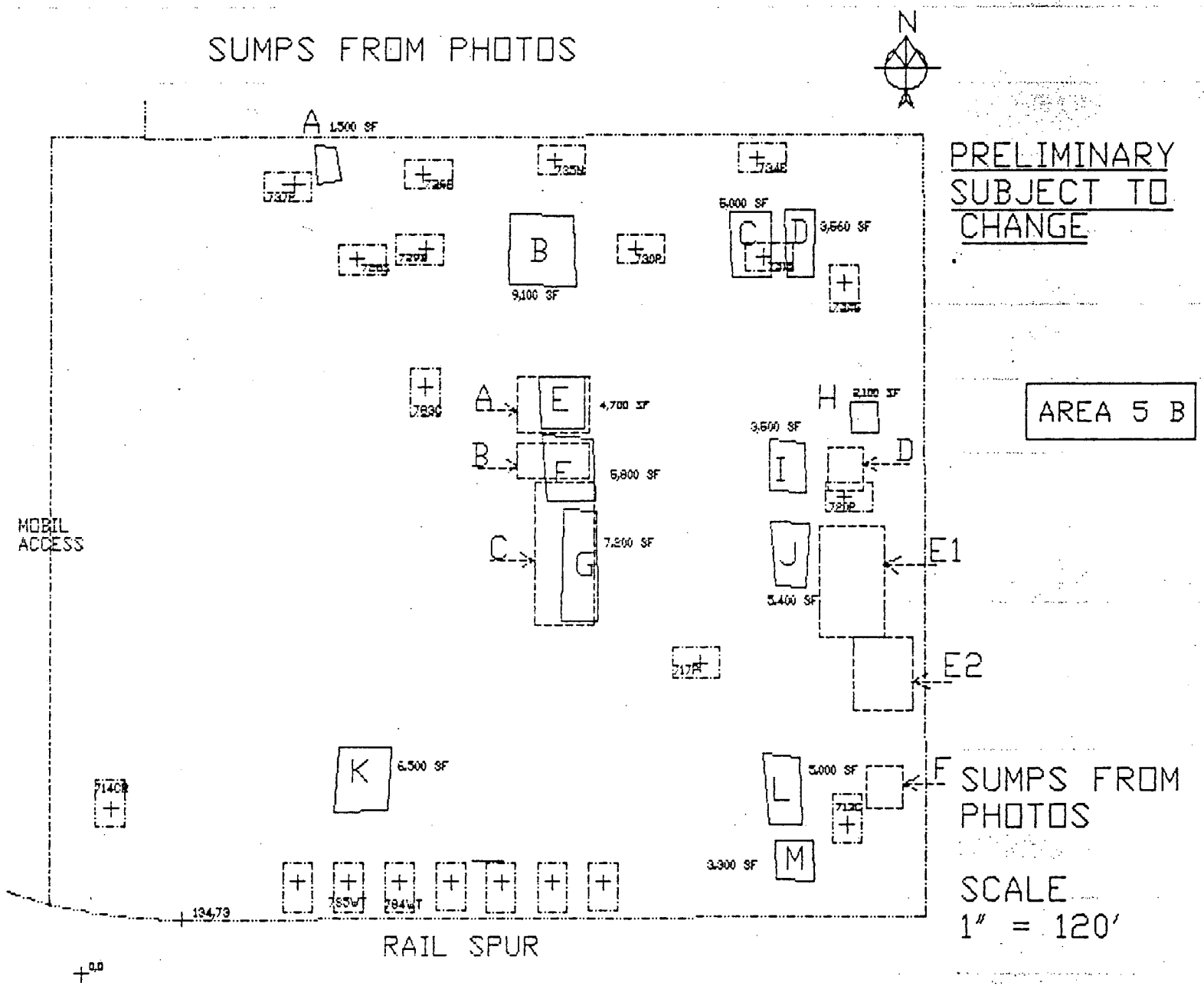


EXHIBIT E

TYPICAL LABORATORY TESTS OF CONTAMINATED MATERIAL

REPORT

TRUESDAIL LABORATORIES, INC.

CHEMISTS - MICROBIOLOGISTS - ENGINEERS
RESEARCH — DEVELOPMENT — TESTING

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92680
AREA CODE 714 • 730-6239
AREA CODE 213 • 225-1564
CABLE: TRUELABS

CLIENT: Ebasco Services/Envirosphere Division
3000 West MacArthur Blvd.
Santa Ana, CA 92704
Attention: Raju Bernard

DATE: October 19, 1988

RECEIVED: September 30, 1988

LABORATORY NO.: 30959

SAMPLE: Soils from McGranahan, Santa Fe Springs

INVESTIGATION

As Requested

RESULTS

Sample Identification	MILLIGRAMS per KILOGRAM Total Petroleum Hydrocarbons (418.1)
P13-T02-10'	9,929
P13-T03-3'	69,319
P13-T04-5'	13,794
MO #7/15'	1,489
MO #8/12'	3

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Julia Nayberg, Manager
Inorganic Chemistry

REPORT

TRUESDAIL LABORATORIES, INC.

CHEMISTS - MICROBIOLOGISTS - ENGINEERS
RESEARCH — DEVELOPMENT — TESTING

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92680
AREA CODE 714 • 730-6239
AREA CODE 213 • 225-1564
CABLE: TRUELABS

CLIENT Ebasco Services/Envirosphere Division
3000 West MacArthur Blvd.
Santa Ana, CA 92704
Attention: Raju Bernard

DATE October 19, 1988

RECEIVED September 30, 1988

LABORATORY NO. 30959

SAMPLE Soils from McGranahan, Santa Fe Springs

INVESTIGATION

Purgeable Organics (Volatiles) by EPA 8010-8020 GC-HECD and GC-PID

RESULTS P130 S1

Constituent	Detection * Limit (mg/kg)	Concentration (mg/kg)**
Acetone	5.0	542
Benzene	5.0	ND
Bromodichloromethane	5.0	ND
Bromoform	5.0	ND
Bromomethane	5.0	ND
Carbon Tetrachloride	5.0	ND
Chlorobenzene	5.0	ND
Chloroethane	5.0	ND
2-Chlorethyvinyl ether	5.0	ND
Chloroform	5.0	ND
Chloromethane	5.0	ND
bis (2-Chloroethyl) ether	5.0	ND
Dibromochloromethane	5.0	ND
1,2-Dichlorobenzene	5.0	ND
1,3-Dichlorobenzene	5.0	ND
1,4-Dichlorobenzene	5.0	ND
Dichlorodifluoromethane	5.0	ND
1,1-Dichloroethane	5.0	ND
1,2-Dichloroethane	5.0	ND
1,1-Dichloroethene	5.0	ND

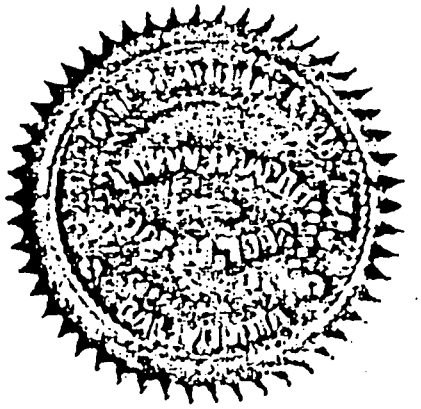
* Detection limits may vary with the type of sample and with the concentrations of other species present.

** ND = Not detected, below detection limit.

Constituent	Detection * Limit (mg/kg)	Concentration (mg/kg)**
trans-1,2-Dichloroethene	5.0	ND
1,2-Dichloropropane	5.0	ND
cis-1,3-Dichloropropene	5.0	ND
trans-1,3-Dichloropropene	5.0	ND
Ethyl Benzene	5.0	1,800
Methylene Chloride	5.0	ND
Methyl Ethyl Ketone	5.0	969
Methyl Isobutyl Ketone	5.0	ND
1,1,2,2-Tetrachloroethane	5.0	ND
Tetrachloroethene	5.0	ND
Toluene	5.0	1,100
1,1,1-Trichloroethane	5.0	ND
1,1,2-Trichloroethane	5.0	ND
Trichloroethene	5.0	ND
Trichlorofluoromethane	5.0	ND
Vinyl Chloride	5.0	ND
Xylenes	5.0	3,700

* Detection limits may vary with the type of sample and with the concentrations of other species present.

** ND = Not detected, below detection limit.



Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Julia Nayberg, Manager
Inorganic Chemistry

REPORT

TRUESDAIL LABORATORIES, INC.

CHEMISTS - MICROBIOLOGISTS - ENGINEERS
RESEARCH — DEVELOPMENT — TESTING

14201 FRANKLIN AVENUE
TUSTIN, CALIFORNIA 92680
AREA CODE 714 • 730-6239
AREA CODE 213 • 225-1564
CABLE: TRUELABS

CLIENT: EBASCO SERVICES/ENVIROSPHERE DIVISION
3000 West MacArthur Boulevard
Santa Ana, CA 92704
Attention: Larry Gordon

DATE: October 10, 1988

RECEIVED: September 30, 1988

SAMPLE: Soils from McGranahan, Santa Fe Springs

LABORATORY NO.: 30975

INVESTIGATION
As requested

RESULTS

Milligrams per Kilogram

Sample Identification	Total Petroleum Hydrocarbons
MOB2/33'	428
MOB1/33'	<1
A4T3-3'	114
A3T4-6'	24,531
A3T3-10'	173
A4T1-10'	26
A3T1-5'	8,255
A4T2-3'	15,065

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Julia Nayberg, Manager
Inorganic Chemistry

TRUESDAIL LABORATORIES, INC.

CLIENT: Ebasco Services
3000 W. MacArthur Blv.
Santa Ana, CA 92704
SAMPLE: Soil MO #2/12'

DATE: October 3, 1988
RECEIVED: September 28, 1988
LAB NUMBER: 30934-2
PROJECT NAME: Garnahan

INVESTIGATION: Purgeable Organics (Volatiles) by GC-HECD and GC-PID (EPA 8010-8020)

Constituent	Approximate Detection Limit*	Concentration (mg/kg)**
Benzene	0.005 mg/kg	ND
Bromodichloromethane	0.005 mg/kg	ND
Bromoform	0.005 mg/kg	ND
Bromomethane	0.005 mg/kg	ND
Carbon Tetrachloride	0.005 mg/kg	ND
Chlorobenzene	0.005 mg/kg	ND
Chloroethane	0.005 mg/kg	ND
2-Chlorethyvinyl ether	0.005 mg/kg	ND
Chloroform	0.005 mg/kg	ND
Chloromethane	0.005 mg/kg	ND
bis (2-Chloroethyl) ether	0.005 mg/kg	ND
Dibromochloromethane	0.005 mg/kg	ND
1,2-Dichlorobenzene	0.005 mg/kg	ND
1,3-Dichlorobenzene	0.005 mg/kg	ND
1,4-Dichlorobenzene	0.005 mg/kg	ND
Dichlorodifluoromethane	0.005 mg/kg	ND
1,1-Dichloroethane	0.005 mg/kg	ND
1,2-Dichloroethane	0.005 mg/kg	ND
1,1-Dichloroethene	0.005 mg/kg	ND
trans-1,2-Dichloroethene	0.005 mg/kg	ND
1,2-Dichloropropane	0.005 mg/kg	ND
cis-1,3-Dichloropropene	0.005 mg/kg	ND
trans-1,3-Dichloropropene	0.005 mg/kg	ND
Methylene Chloride	0.005 mg/kg	ND
Methyl Ethyl Ketone	0.005 mg/kg	ND
Methyl Isobutyl Ketone	0.005 mg/kg	ND
1,1,2,2-Tetrachloroethane	0.005 mg/kg	ND
Tetrachloroethene	0.005 mg/kg	ND
Toluene	0.005 mg/kg	ND
1,1,1-Trichloroethane	0.005 mg/kg	ND
1,1,2-Trichloroethane	0.005 mg/kg	ND
Trichloroethene	0.005 mg/kg	ND
Trichlorofluoromethane	0.005 mg/kg	ND
Vinyl Chloride	0.005 mg/kg	ND
Xylenes	0.005 mg/kg	ND

* Detection limits may vary with the type of sample and with the concentrations of other species present.
** ND = Not detected, below detection limit.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Julia Nayberg, Manager
Inorganic Chemistry

TRUESDAIL LABORATORIES, INC.

CLIENT: Ebasco Services
3000 W. MacArthur Blv.
Santa Ana, CA 92704
SAMPLE: Soil MO #5/12'

DATE: October 3, 1988
RECEIVED: September 28, 1988
LAB NUMBER: 30934-6

INVESTIGATION: Purgeable Organics (Volatiles) by GC-HECD and GC-PID (EPA 8010-8020)

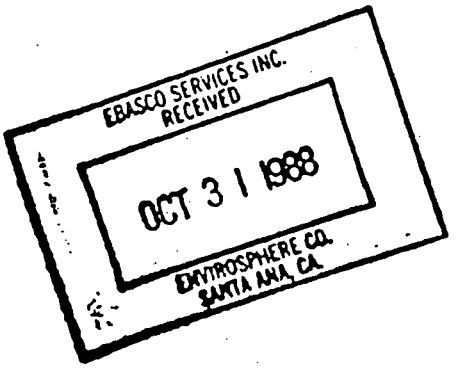
Constituent	Approximate Detection Limit*	Concentration (mg/kg)**
Benzene	0.005 mg/kg	ND
Bromodichloromethane	0.005 mg/kg	ND
Bromoform	0.005 mg/kg	ND
Bromomethane	0.005 mg/kg	ND
Carbon Tetrachloride	0.005 mg/kg	ND
Chlorobenzene	0.005 mg/kg	ND
Chloroethane	0.005 mg/kg	ND
2-Chlorethyvinyl ether	0.005 mg/kg	ND
Chloroform	0.005 mg/kg	ND
Chloromethane	0.005 mg/kg	ND
bis (2-Chloroethyl) ether	0.005 mg/kg	ND
Dibromochloromethane	0.005 mg/kg	ND
1,2-Dichlorobenzene	0.005 mg/kg	ND
1,3-Dichlorobenzene	0.005 mg/kg	ND
1,4-Dichlorobenzene	0.005 mg/kg	ND
Dichlorodifluoromethane	0.005 mg/kg	ND
1,1-Dichloroethane	0.005 mg/kg	ND
1,2-Dichloroethane	0.005 mg/kg	ND
1,1-Dichloroethene	0.005 mg/kg	ND
trans-1,2-Dichloroethene	0.005 mg/kg	ND
1,2-Dichloropropane	0.005 mg/kg	ND
cis-1,3-Dichloropropene	0.005 mg/kg	ND
trans-1,3-Dichloropropene	0.005 mg/kg	ND
Methylene Chloride	0.005 mg/kg	ND
Methyl Ethyl Ketone	0.005 mg/kg	ND
Methyl Isobutyl Ketone	0.005 mg/kg	ND
1,1,2,2-Tetrachloroethane	0.005 mg/kg	ND
Tetrachloroethene	0.005 mg/kg	ND
Toluene	0.005 mg/kg	ND
1,1,1-Trichloroethane	0.005 mg/kg	ND
1,1,2-Trichloroethane	0.005 mg/kg	ND
Trichloroethene	0.005 mg/kg	ND
Trichlorofluoromethane	0.005 mg/kg	ND
Vinyl Chloride	0.005 mg/kg	ND
Xylenes	0.005 mg/kg	ND

* Detection limits may vary with the type of sample and with the concentrations of other species present.
** ND = Not detected, below detection limit.

Respectfully submitted,
TRUESDAIL LABORATORIES, INC.

Julia Nayberg, Manager
Inorganic Chemistry

October 26, 1988



WCAS
WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

A

EBASCO SERVICES, INC.
3000 W. MacArthur Blvd.
Santa Ana, CA 92704

Attn: Larry Gordon

JOB NO. 11143

LABORATORY REPORT

Samples Received: Eight (8) soils
Date Received: 10-21-88
Purchase Order No: Proj#: MGCC-8097/McGranahan

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
One (1) soil	Halogenated & Aromatic Volatile Organics by EPA 8010/8020	Data Sheet
Two (2) soils	Hydrocarbon Distribution by Gas Chromatography/FID	Table I
Eight (8) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table II

Shelley Rinker
Senior Chemist

D.J. Northington, Ph.D.
Technical Director

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225

WEST COAST ANALYTICAL SERVICE, INC.

EBASCO SERVICES, INC.
Mr. Larry Gordon

Job # 11143
October 26, 1988

LABORATORY REPORT

TABLE I

Parts Per Million

Compound	Sample MO #8/12'	Sample MO #9/12'	Detection Limit
Methane	ND	ND	1
Ethane	ND	ND	1
Ethylene	ND	ND	1
Propane	ND	ND	1
Propylene	ND	ND	1
iso-Butane	ND	ND	1
n-Butane	ND	ND	1
Butene	ND	ND	1
iso-Pentane	ND	ND	1
n-Pentane	ND	ND	1
C_6 Hydrocarbon	ND	ND	1
C_7 Hydrocarbon	ND	ND	1
C_8 Hydrocarbon	ND	4	1
C_9 Hydrocarbon	ND	10	1
C_{10} Hydrocarbon	ND	ND	1

ND-Not Detected

Date Analyzed: 10-24-88

WEST COAST ANALYTICAL SERVICE, INC.

EBASCO SERVICES, INC.
Mr. Larry Gordon

Job # 11143
October 26, 1988

LABORATORY REPORT

TABLE II

Parts Per Million (ug/g)

Sample No.	Total Petroleum Hydrocarbons
MO #8/12'	ND
MO #9/12'	ND
MO #10/10'	ND
MO #11/11'	210
MO #12/10'	530
MO #13/12'	3,000
MO #14/10'	160
MO #15/12'	13,000
Detection Limit	10

ND-Not Detected

Date Analyzed: 10-24-88

Client: EBASCO SERVICES INCORPORATED
Job No: 11143
Date Analyzed: 21-Oct-88
Analysis: EPA 601/602 (8010/8020)

Sample: MO#15/12'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 5000

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	10000
Bromomethane	ND	10000
Vinyl Chloride	ND	6000
Chloroethane	ND	6000
Methylene Chloride	ND	50000
1,1-Dichloroethylene	ND	6000
1,1-Dichloroethane	ND	4000
trans-1,2-Dichloroethylene	ND	3000
Trichlorofluormethane	ND	4000
Chloroform	ND	3000
1,2-Dichloroethane	ND	4000
1,1,1-Trichloroethane	ND	3000
Carbon Tetrachloride	ND	3000
Bromodichloromethane	ND	3000
1,1,2,2-Tetrachloroethane	ND	3000
1,2-Dichloropropane	ND	3000
trans-1,3-Dichloropropylene	ND	3000
Trichloroethylene	ND	3000
Dibromchloromethane	ND	3000
1,1,2-Trichloroethane	ND	3000
Benzene	ND	2000
cis-1,3-Dichloropropylene	ND	3000
2-Chloroethyl Vinyl Ether	ND	8000
Bromoform	ND	5000
Tetrachloroethylene	ND	3000
Toluene	ND	2000
Chlorobenzene	ND	2000
Ethylbenzene	20000	2000
Total Xylenes	61000	2000
1,3-Dichlorobenzene	ND	2000
1,4-Dichlorobenzene	ND	2000
1,2-Dichlorobenzene	ND	2000

Other Compounds
None Detected

ND Not Detected, The limit of detection is reported above.

October 26, 1988

WCAS
WEST COAST ANALYTICAL SERVICE, INC.
ANALYTICAL CHEMISTS

EBASCO SERVICES, INC.
3000 W. MacArthur Blvd.
Santa Ana, CA 92704

Attn: Larry Gordon

JOB NO. 11159

A

LABORATORY REPORT

Samples Received: Three (3) soils
Date Received: 10-24-88
Purchase Order No: MGCC-8097/McGranahan

The samples were analyzed as follows:

Samples Analyzed	Analysis	Results
One (1) soil	Halogenated & Aromatic Volatile Organics by EPA 8010/8020	Data Sheet
Three (3) soils	Total Petroleum Hydrocarbons by EPA 418.1	Table I

TABLE I

Parts Per Million (ug/g)

Sample No.	Total Petroleum Hydrocarbons
MO #16/12'	4200
MO #17/12'	ND
MO #18/12'	1900
Detection Limit	10

ND-Not Detected

Date Analyzed: 10-25-88

Shelley Rinker
Senior Chemist

D.J. Northington, Ph.D.
Technical Director

9840 Alburtis Avenue • Santa Fe Springs, California 90670 • 213/948-2225

Client: EBASCO SERVICES INCORPORATED
Job No: 11159
Date Analyzed: 25-Oct-88
Analysis: EPA 601/602 (8010/8020)

Sample: MO#18/12'
Matrix: Soil
Samp Amt: 1 gm
Dil Fact: 100

Compound	Concentration ug/Kg	Detection Limits
Chloromethane	ND	500
Bromomethane	ND	500
Vinyl Chloride	ND	300
Chloroethane	ND	300
Methylene Chloride	ND	2500
1,1-Dichloroethylene	ND	300
1,1-Dichloroethane	ND	200
trans-1,2-Dichloroethylene	ND	150
Trichlorofluormethane	ND	200
Chloroform	ND	150
1,2-Dichloroethane	ND	200
1,1,1-Trichloroethane	ND	150
Carbon Tetrachloride	ND	150
Bromodichloromethane	ND	150
1,1,2,2-Tetrachloroethane	ND	150
1,2-Dichloropropane	ND	150
trans-1,3-Dichloropropylene	ND	150
Trichloroethylene	ND	150
Dibromchloromethane	ND	150
1,1,2-Trichloroethane	ND	100
Benzene	ND	150
cis-1,3-Dichloropropylene	ND	400
2-Chloroethyl Vinyl Ether	ND	250
Bromoform	ND	150
Tetrachloroethylene	ND	100
Toluene	ND	100
Chlorobenzene	ND	100
Ethylbenzene	160	100
Total Xylenes	ND	100
1,3-Dichlorobenzene	ND	100
1,4-Dichlorobenzene	ND	100
1,2-Dichlorobenzene		

Other Compounds
None Detected

ND Not Detected, The limit of detection is reported above.

EXHIBIT F

SOIL INVESTIGATION - WESTERN LABORATORIES

Western Laboratories
Soil and Foundation Engineering
A McLaren Company

October 21, 1988 Work Order 88-184

McGranahan, Carlson & Company
1000 Corporate Pointe
Suite 105
Culver City, California 90230

Re: Soils Investigation - Proposed Industrial Development - Located Between Norwalk Boulevard and Shoemaker Avenue, and Florence Avenue and Romandel Street, in the City of Santa Fe Springs, California

Dear Sirs:

This report presents the data gathered during our investigations and our opinions regarding the soils engineering factors affecting the development of the subject site.

The referenced property is located throughout various areas between Norwalk Boulevard on the east, and Shoemaker Avenue on the west, Florence Avenue on the south and Romandel Street on the north, in Santa Fe Springs.

At the time of our investigation, the ± 120 acre property was partially developed and those portions not developed were occupied by active and inactive oil wells and pumping structures. Above and below ground utility lines are located throughout the parcel along with an above ground tank farm. Public and private streets, railroad tracks, and asphaltic and concrete paved areas occur throughout the site area.

PROPOSED SITE DEVELOPMENT

The purpose of our investigation was to explore subsurface conditions and to develop preliminary soils engineering design data to permit evaluation of the site with respect to the proposed development.

It is proposed to utilize the ± 120.0 acre site for commercial/industrial use. It is anticipated that block or reinforced concrete tilt-up construction will be utilized with on-grade parking.

FIELD EXPLORATION

One hundred thirty-eight (138) 24-inch wide exploratory test excavations were placed at locations, as shown on the attached plan. The excavations were logged by our Field Engineer and disturbed and undisturbed samples were obtained for laboratory testing and analysis. Logs are shown on Table I.

Undisturbed samples for detailed testing in our laboratory were obtained by pushing or driving a cylindrical sampling spoon into the material (ASTM:D-3550). A solid barrel-type spoon was used having an inside diameter of 2-1/2 inches, a tapered cutting tip at the lower end and a ball valve at the upper end. The barrel is lined with thin brass rings, each 1 inch in length. The spoon is penetrated into the soil below the depth of the excavation approximately 12 inches and the central portion of the soil sample retained for testing. All samples obtained in their natural field condition are sealed in airtight containers and transported to the laboratory.

SURFACE CONDITIONS

Fill soils and disturbed top soils, ranging in depth from 0.5 to 11.0 feet below existing grade, were encountered in all of the excavations. These soils classified as Sands and slightly clayey Sands, and were low in density and variable in moisture contents.

The natural ground, as encountered beneath the low density upper soils, classified as Sand; slightly clayey Sands; and were noted to be firm to dense. The upper portion of the natural soils was well below optimum moisture content.

Moderate caving occurred at deeper elevations in the cohesionless soils, however, no evidence of near surface ground water was encountered.

LABORATORY TESTS

Following visual and tactile classifications in the field, samples were sealed in airtight containers and transported to our laboratory where classifications were supplemented by index tests, such as grain size, and Atterberg Tests for representative samples. Unit weights, moisture determinations and Sand Equivalency Tests were also performed on selected samples and the results are revealed on Tables II, III, and IV.

A. Direct Shear Tests (ASTM:D-3080) were performed with a strain control type shear machine where the soil samples are subjected to a 0.05 inch per minute rate of strain, under varying loads and under conditions of saturation. The results of these tests are given on Table II and are graphically shown on plates A through H.

B. Expansion Index Tests, in accordance with the requirements of the Uniform Building Code Standard No. 29-2, were performed on typical specimens of the on-site soils. This test measures the expansion index of the soils from 50 percent saturation to total saturation under a surcharge of, 12.63 lbs. after a 24 hour saturation period, or until the rate of expansion becomes constant. Results of these tests are on Table III and reveal the upper soils to be very low in expansion potential.

C. Consolidation Tests (ASTM:D-2435) were performed on in-situ moisture and saturated specimens of typical soils. The consolidometer, like the direct shear machine, is designed to receive the specimens in the field condition. Porous stones, placed at the top and bottom of the specimens, permit the free flow of water into or from the specimens during testing. Successive load increments were applied to the top of the sample and progressive and final settlements under each increment were recorded to an accuracy of 0.0001 inch. The final settlements so obtained are plotted to create the consolidation curves shown on Plates J through P.

D. Resistance 'R' Value Tests (ASTM:D-2844) are performed with a stabilometer and expansion pressure device on encountered specimens of the on-site soils within the upper 2.0 feet of proposed subgrade in areas to be paved. The lowest 'R' Value obtained from these samples was 44, resulting in the recommended pavement sections indicated on Table VII.

E. Soluble Sulfate Tests (per Calif. 417A) were performed on representative samples of the upper soils by correlating the optical density of a barium sulfate precipitate with a calibration curve obtained from precipitates of known sulfate concentrations. These tests indicate a maximum of .0160 percent concentration of soluble sulfate within the on-site soils. Consequently, no special cement need be utilized in concrete that comes in contact with finished on-site soils. Additional laboratory tests may be required for import soils.

F. Corrosivity Tests on typical samples ranged from 2500 to 16900 ohm, cm minimum resistivity, indicating a very low to moderate corrosive environment for buried bare metal conduit. If this is considered critical, it is recommended that an engineer specializing in corrosion be consulted regarding suitable type of piping and necessary protective measures for underground metal conduits. Additional laboratory tests may be required for import soils.

CONCLUSIONS

Following environmental approval, development of the site, as proposed, is considered feasible from a soils engineering standpoint, based on the implementation and incorporation of the recommendations which follow into the site preparation, grading and construction of the proposed structure.

GENERAL GRADING AND COMPACTION RECOMMENDATIONS

All site grading operations should conform to the local building and safety codes and to the rules and regulations of those governmental agencies having jurisdiction over the subject construction.

The grading contractor is responsible to notify governmental agencies, as required, and the Soils Engineer prior to initiating grading operations, and any time grading is resumed after an interruption. Each step of grading should be approved in a specific area by the Soils Engineer before proceeding with subsequent work.

All vegetation must be stripped and hauled from the certified fill area prior to the start of the grading operations.

The existing low density fill soils and disturbed natural soils, as denoted in the attached Log of Excavations, are not suitable in their present condition for slab, structural or pavement support. These soils shall be excavated to competent natural ground, and the underlying 1.0 foot of supporting soils processed and compacted in-place to a minimum of 90 percent of the laboratory standard. This shall also be performed in cut areas where the natural soils are exposed. The excavated soils shall then be cleansed of any root structures and deleterious debris, brought to proper moisture content and replaced, utilizing compaction equipment to a minimum of 90 percent of the laboratory standard under the direction of the Soils Engineer, in accordance with the attached "Specifications for Compacted Fill Soils".

Any proposed import fill soils shall be approved by the Soils Engineer prior to importing to the site. Any additional fill soils placed shall also be compacted in accordance with the attached "Specifications".

Abandoned oil wells should be in compliance with the governing authority. During grading, well heads should be observed prior to placing fill.

A diligent search for septic tanks, cesspools or underground lines shall be performed during grading operations. If any are encountered they shall be excavated and backfilled under our supervision.

Adequate protection shall be provided for adjacent buildings or improvements on adjoining properties during grading operations. Shoring may be required prior to excavation.

Any excavation without shoring shall be cut at a one and one-half horizontal to one vertical slope and adequate safety precautions should be provided for any adjacent streets or structures.

All backfills shall be mechanically compacted to at least 90 percent of the maximum density obtainable by the ASTM:Designation D-1557-70 method of compaction. Jetting or flooding shall not be permitted in any trench or wall backfill.

FOUNDATION AND STRUCTURAL RECOMMENDATIONS

If the recommendations contained in this report are followed, the proposed one and two-story structures may be founded on a conventional foundation a minimum of 18 inches below lowest adjacent grade into competent natural ground or certified fill soils with a recommended safe bearing capacity value of 1850 lbs./sq.ft. for continuous foundations and 2350 lbs./sq.ft. for isolated foundations. No reinforcement of foundations is necessary in regards to on-site soil properties.

The allowable soil pressures may be increased one-third for combinations of vertical and horizontal forces where permitted by the Uniform Building Code.

It should be brought to your attention that it will be necessary to deepen foundations into competent natural ground, if perimeter over-excavation of the foundations is not accomplished due to the close proximity of the property line.

All foundation excavations shall be inspected and approved by the Soils Engineer prior to pouring concrete to ensure uniform soils conditions, in accordance with the aforementioned recommendations.

In designing for lateral loads within the certified areas, a coefficient of friction of 0.25 may be assumed between the slabs-on-grade, the foundations and the compact underlying soils. Compact soils around the foundations may be assumed to develop passive earth pressures equivalent to those pressures exerted by a fluid having a density of 250 lbs./cu.ft. with a maximum of 2500 lbs./sq.ft. Where the direction of thrust is towards a slope, due consideration should be given to the mass of soil immediately in front of the foundation to determine the capability of developing this passive and frictional resistance.

Active earth pressures against retaining walls and other retaining structures, placed within the certified area, will be equivalent to the pressure exerted by a fluid having a density of 30 lbs./cu.ft., for granular drained soils, where the slope of the retained material is level and there is no surcharge and the maximum height of the retained material is 20.0 feet. For a restrained condition, the active earth pressure will be equivalent to the pressure exerted by a fluid having a density of 45 lbs./cu.ft., for granular drained soils. A hydrostatic loading of 63 lbs./cu.ft. may be utilized in addition to these values where the material which is in the active state is saturated.

Downward vertical loadings of 110 lbs./cu.ft. for granular drained soils and 135 lbs./cu.ft. for saturated soils shall be utilized where there is no surcharge.

It is anticipated that all foundations sized for the recommended soil pressures will experience maximum ultimate settlements on the order of one-half inch with maximum differential settlements not exceeding one-quarter inch.

Due to the granular nature of the upper soils, the majority of this settlement is expected to occur during the construction phase, as the loads are placed.

Adequate drainage away from all structures and paved areas shall be provided at all times.

CONCRETE SLABS-ON-GRADE

The expansion potential of the on-site soils that will directly affect slabs cast-on-grade, is considered very low. Floor slabs can be placed directly upon the certified fill soils with no remedial reinforcement. However, some reinforcement may be required by the Structural Engineer due to proposed floor loads or other structural factors not considered herein.

SHRINKAGE, BULKING AND SUBSIDENCE

Based on limited widespread density data, the following information is provided for use in estimating soil quantities:

Shrinkage (due to recompaction of the loose upper soils) is estimated to be on the order of 13 to 17 percent, based on assumed relative compaction of 92 percent for compacted soils. Bulking (volume increase when rock or deep dense import soils are utilized as compacted fill) should vary from 0 to 5 percent. Subsidence (due to placement of compacted fill over competent natural soils) may be estimated to be 0.05 foot per foot of fill placed, most of which will occur during grading.

The above values are predicated on an average relative compaction of 92 percent for compacted fills, and compaction to a greater or lesser degree will influence soil quantities. Because of this (plus clearing losses and the limited amount of data available), some adjustment in grades and/or quantities near the completion of grading should be anticipated.

CLOSURE

Findings in this report are valid as of this date; however, changes in conditions of a property can occur with passage of time whether they be due to natural processes or works of man on this or adjacent properties. In addition, changes in applicable or appropriate standards occur whether they result from legislation or broadening of knowledge. Accordingly, findings of this report may be invalidated wholly or partially by changes outside our control. Therefore, this report is subject to review after a period of one year.

The information and recommendations of this report are based upon the assumption that the soil conditions do not deviate from those disclosed in the excavations. If any variations or undesirable conditions are encountered during construction, or if the proposed construction will differ from that planned at the present time, McLaren Western Labs should be notified so that supplemental recommendations can be given.

This report is issued with the understanding that it is the responsibility of the owner or of his representative, to ensure that the information and recommendations contained herein are called to the attention of the Architect and Engineers for the project and incorporated into the plans and that the necessary steps are taken to see that the Contractors and Subcontractors carry out such recommendations in the field.

This report is subject to review by the controlling authorities for the project.

We appreciate this opportunity to be of service to you.

Respectfully submitted,

McLAREN WESTERN LABORATORIES

Sterling F. White
R.G.E. 891

SPECIFICATIONS FOR COMPACTED FILL

PREPARATION

The existing fill must be removed under the supervision of the Soils Engineer to competent natural ground.

After the foundation for the fill has been cleared, plowed or scarified, it shall be disced or bladed until it is uniform and free from large clods, brought to a proper moisture content and compacted to not less than 90% of the maximum dry density in accordance with ASTM:D-1557-78 (5 layers - 25 blows per layer; 10 lb. hammer - 18 inch drop; 4 inch diameter mold).

MATERIALS

On-site materials may be used for the fill, or imported fill materials shall consist of materials approved by the Soils Engineer, equal to or superior to the on-site and may be obtained from the excavation of banks, borrow pits or any other approved source. The materials used should be free of vegetable matter and other deleterious substances and shall not contain rocks or lumps greater than six inches in maximum dimension.

PLACING, SPREADING AND COMPACTING FILL MATERIALS

A. The selected fill material shall be placed in layers which when compacted shall not exceed six inches in thickness. Each layer shall be spread evenly and shall be thoroughly mixed during the spreading to insure uniformity of material and moisture of each layer.

B. Where the moisture content of the fill material is below the limits specified by the Soils Engineer, water shall be added until the moisture content is as specified to assure thorough bonding and thorough compaction.

C. Where the moisture content of the fill material is above the limits specified by the Soils Engineer, the fill materials shall be aerated by blading or other satisfactory methods until the moisture content is as specified.

D. After each layer has been placed, mixed and spread evenly it shall be thoroughly compacted to not less than 90% of the maximum dry density in accordance with ASTM:D-1557-78 (5 layers - 25 blows per layer; 10 lb. hammer - 18 inch drop; 4 inch diameter mold) or other density tests which will attain equivalent results.

Compaction shall be by sheepsfoot roller, multi-wheel pneumatic tire roller or other types of acceptable rollers. Rollers shall be of such design that they will be able to compact the fill to the specified density. Rolling shall be accomplished while the fill material is at the specified moisture content. Rolling of each layer shall be continuous over its entire area and the roller shall make sufficient trips to ensure that the desired density has been obtained. The final surface of the lot areas to receive slabs-on-grade should be rolled to a dense, smooth surface.

E. The outside of all fill slopes shall be compacted by means of sheepsfoot rollers or other suitable equipment. Compaction operations shall be continued until the outer nine inches of the slope is at least 90% compacted. Compacting of the slopes must be done progressively in increments not to exceed fill height as the fill is brought to grade.

F. Field density tests shall be made by the Soils Engineer of the compaction of each layer of fill. Density tests shall be made at intervals not to exceed two feet of fill height provided all layers are tested. Where the sheepsfoot rollers are used, the soils may be disturbed to a depth of several inches and density readings shall be taken in the compacted material below the disturbed surface. When these readings indicate the density of any layer of fill or portion thereof is below the required 90% density, the particular layer or portion shall be reworked until the required density has been obtained.

INSPECTION

The inspection by the Soils Engineer shall be made during all filling and compacting operations so that he can verify that the fill was made in accordance with the accepted specifications.

SEASONAL LIMITATIONS

No fill materials shall be placed, spread or rolled during unfavorable weather conditions. When work is interrupted by heavy rains, fill operations shall not be resumed until the field tests by the Soils Engineer indicate that the moisture content and density of the fill are as previously specified.

TABLE IV

MAXIMUM DRY DENSITIES AND IN-SITU SOIL CONDITION

Maximum Dry Densities

Sample	Classification	Optimum Moisture %	Max. Dry Density Lbs./Cu.Ft.
I	Sand, fine to medium	9.0	118.8
II	Sand, fine to medium, slightly silty	11.5	116.0
III	Sand, fine to medium, slightly clayey	11.0	132.0
IV	Sand, fine to medium, slightly clayey	13.5	121.0
V	Sand, fine to medium, clayey	11.5	126.5

Random In-Situ Soil Condition

Test Excavation	Depth	Moisture %	Unit Weight Lbs./Cu.Ft.
1	2.5	9.1	104.3
1	5.0	10.6	114.9
10	5.0	9.4	110.1
10	8.0	9.8	109.0
20	4.0	8.4	107.6
20	10.0	10.7	111.8
30	6.0	6.6	100.8
30	12.5	10.0	114.9
40	2.0	7.0	98.2
40	10.0	10.4	101.8
50	5.0	9.9	109.6
50	10.0	11.3	106.1
60	6.0	8.3	111.2
60	11.5	7.7	107.3
70	3.0	12.1	114.2
70	10.0	11.6	110.8

TABLE IV
(Continued)

Test Excavation	Depth	Moisture %	Unit Weight Lbs./Cu.Ft.
80	2.0	10.9	111.3
80	4.0	11.2	112.7
90	3.0	10.6	113.8
90	7.0	10.3	111.9
100	4.0	10.5	114.8
100	8.0	11.2	108.3
110	6.0	10.3	110.5
110	10.0	9.4	109.3
120	2.0	10.7	112.7
120	4.0	11.3	116.1
130	2.0	7.6	108.3
130	10.0	10.8	112.9

TABLE V

DIRECT SHEAR TESTS

Sample	Classification	Angle of Internal Friction (Degrees)	Cohesion (Lbs./Sq.Ft.)
A	Sand, fine to medium	37	50
B	Sand, fine to medium, slightly clayey	35	225
C	Sand, fine to medium, slightly silty	36	140
D	Sand, fine to medium, slightly clayey	34	300
E	Sand, fine to medium, slightly clayey	34	175
F	Sand, fine to medium, clayey	30	175
G	Sand, fine to medium	37	50
H	Sand, fine to medium, slightly clayey	36	180

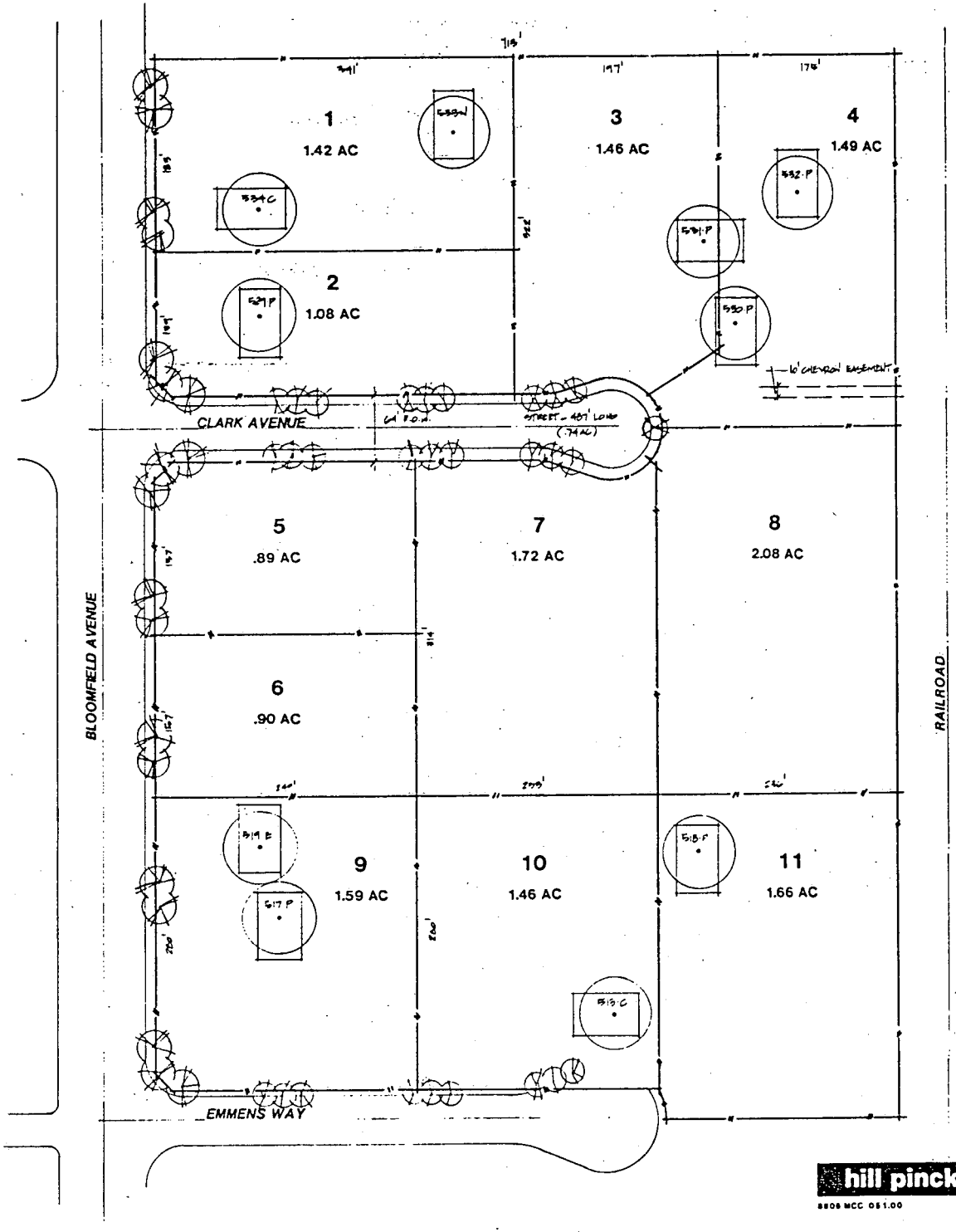
TABLE VI

EXPANSION TESTS

Sample	Classification	Expansion Index
A	Sand, fine to medium	02
B	Sand, fine to medium, slightly clayey	17
C	Sand, fine to medium, slightly silty	14
D	Sand, fine to medium, slightly clayey	21
E	Sand, fine to medium, slightly clayey	19
F	Sand, fine to medium, clayey	23
G	Sand, fine to medium,	01
H	Sand, fine to medium, slightly clayey	16

EXHIBIT G

TENATIVE TRACT MAPS - AREAS 2, 5A & 5B



MCGRANAHAN CARLSON & COMPANY
COMMERCE CENTER II
SANTA FE SPRINGS, CALIFORNIA

SITE PLAN - AREA 2

SCALE: 1" = 40'

0 20 40 80 120 FT

hill pinckert architects, inc.

8808 MCC 05 1.00

SEPTEMBER 12, 1988